**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

SKYHOOK WIRELESS, INC.,	)))	
Plaintiff and Counterclaim-Defendant,	))	Civil Action No. 1:10-cv-11571-RWZ
v.	))	and
GOOGLE INC.,	))	Civil Action No. 1:13-cv-10153-RWZ
Defendant and Counterclaimant.	))))	**REDACTED VERSION**

SKYHOOK WIRELESS, INC.'S TRIAL BRIEF

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I.   INTRODUCTION

Skyhook Wireless, Inc. ("Skyhook"), a small start-up based in Boston, will prove that, rather than paying to license Skyhook's exciting new technology that Google Inc. ("Google") had learned about under a Non-Disclosure Agreement (or acquire Skyhook outright), Google consciously chose instead to "build Skyhook," despite knowing that Skyhook had extensive patent protection for the technology it had disclosed to Google. In October 2008, Skyhook was poised for greatness due to its "magical" Wi-Fi access point database and related technology for pinpointing the location of mobile devices. In late 2007, Skyhook beat out vigorous competition from Google to win a contract with Apple to place Skyhook's product on the first Wi-Fi capable iPhone. Steve Jobs, Apple's visionary chief executive, negotiated the contract himself with Ted Morgan, one of Skyhook's founders.

At Macworld in January 2008, a highly anticipated Apple event showcasing its latest technological offerings, Steve Jobs revealed that the iPhone featured Skyhook's Wi-Fi location technology and described it with admiration: "Isn't that cool? It's really cool." Tr. Ex. 331 at 17:25 (MP4 video). Apple's announcement and praise for Skyhook led to a flurry of emails within Google conceding that Skyhook was the industry leader in an area where Google was weak. After determining a license was not possible and rejecting an internal proposal to pay well into nine figures to acquire Skyhook, Google set out to "build 'Skyhook'" (Tr. Ex. 1228) by copying a technology on which Google was repeatedly told Skyhook held numerous patents.

Skyhook will present evidence that Google's WiFi Access Point ("AP") Database, WiFi Pipeline code, Network Location Provider ("NLP") code on Google and non-Google Android/NLP devices, devices with GPS and NLP code, Android/NLP devices with Qualcomm GPS, and components of Android OS, NLP, and Google Location Server ("GLS") infringe Skyhook's U.S. Patent No. 7,433,694 ("the 694 Patent"), U.S. Patent No. 7,474,897 ("the 897

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Patent"), U.S. Patent No. 7,856,234 ("the 234 Patent"), U.S. Patent No. 8,154,454 ("the 454

Patent"), U.S. Patent No. 8,223,074 ("the 074 Patent"), U.S. Patent No. 8,242,960 ("the 960

Patent"), U.S. Patent No. 8,054,219 ("the 219 Patent"), and U.S. Patent No. 8,031,657 ("the 657

Patent") (collectively, "the Patents-in-Suit" or "the Asserted Patents").[1]

II.   GOOGLE INFRINGES SKYHOOK'S EIGHT PATENTS-IN-SUIT

Skyhook's patented technology enabled the mobile device revolution. Location is a

tentpole feature for mobile devices – mobile devices, especially smart phones, without location

capability are not viable products in the marketplace. And Wi-Fi location, which is more

accurate than cell tower location and works where GPS location does not work well, or at all,

such as the urban canyons in downtown city areas, is the backbone of mobile device location, as

evidenced on the screens of Android devices when Wi-Fi is turned off:
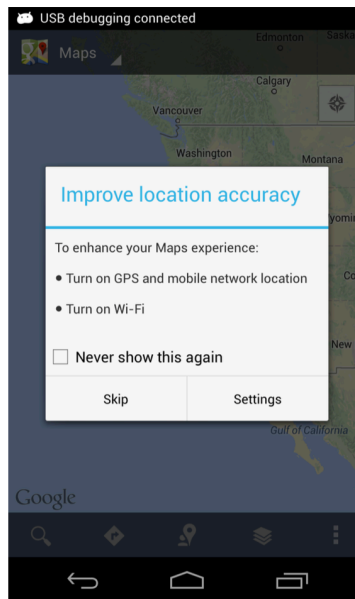
A.   The Asserted Patents

Skyhook is asserting eight patents at trial: the 694 Patent (Tr. Ex. 101), the 897 Patent (Tr.

Ex. 103), the 234 Patent (Tr. Ex. 105), the 657 Patent (Tr. Ex. 107), 219 Patent (Tr. Ex. 109), the

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[1] The parties are currently discussing a possible further reduction of patents and claims.

454 Patent (Tr. Ex. 111), the 074 Patent (Tr. Ex. 113), the 960 Patent (Tr. Ex. 115).   For

purposes of Skyhook's damages analysis, discussed below, these Patents are grouped in three

categories: the 694, 657, 454, and 960 Patents comprise the Server-Side Patents, the 897, 234,

and 074 Patents comprise the User Device Patents, and the 219 Patent is treated as a separate

category for damages purposes.

The Court is familiar with the Patents-in-Suit, having conducted two Markman hearings

and resolved extensive summary judgment briefing and arguments.   Accordingly, the subject

matter of the Asserted Patents and the Asserted Claims is addressed here only briefly.

1.   694 Patent

Claim 1 of the 694 Patent addresses a database of Wi-Fi access points within a target area

on the order of tens of miles, with a unique identifier calculated position information for each

access point in the database, and certain claimed characteristics. Google has created a database of

Wi-Fi access points through two means of collection: (1) CityBlock vehicles equipped with Wi-

Fi scanners that drove every street in major cites and metropolitan areas in the United States; and

(2) WiFi-enabled Android devices that scan Wi-Fi access points within range of the Android

device and transmit access point location-related information to Google servers.   CityBlock

collection took place from 2007 through March 2010.   Android collection began in 2008.

Previously collected CityBlock data continued to be used in Google's Wi-Fi access point

database through March 2012. The Court has ruled that pure Android collection does not meet

the "target area" limitation of the 694 and 657 Patents (the 657 Patent is discussed below). Dkt.

565.   However, Android collection remains important for trial for several reasons.   First, the

evidence will show that the CityBlock collection was used as a "seed" to "bootstrap" Android

collection, which would not have been possible without the prior CityBlock collection. Second,

Android collection is relevant to the "recorded location information" limitation of the 897 Patent (discussed below) under the Court's construction of that term.

2.   657 Patent

Claim 1 of the 657 Patent addresses a database of Wi-Fi access points with certain of the characteristics of the database of claim 1 of the 694 Patent, but 657 claim 1 adds limitations regarding accounting for newly discovered readings in the database. The Wi-Fi access point environment is fluid. New access points may be deployed, existing access points may be moved, and old access points may be taken out of service. New readings (Wi-Fi scans) can detect newly deployed access points or new locations of existing access points that have moved. Claim 1 of the 657 Patent accounts for this fluid, uncontrolled environment by updating the database.

3.   897 Patent

Claims 1, 3, and 4 of the 897 Patent address a method of using a database of Wi-Fi access points in the fluid environment discussed above to determine the location of a WiFi-enabled device. Because access points may have moved, or because they may otherwise be associated with bad location information in the database, the database may have unreliable data for some of the access points within range of the device. The Asserted Claims of the 897 Patent address using rules to determine which access point location in the database to use, and which to exclude, when using the database to calculate device positions.

4.   234 Patent

Claims 1, 3, 4, 10, and 18 of the 234 Patent all relate to the use of Wi-Fi access points to calculate not only the estimated position of a WiFi-enabled device, but also the expected error, or accuracy of that position estimate. Claims 1 and 18 claim, respectively, a method and system for estimating the position and expected error of the position estimate based on characteristics of the Wi-Fi access points within range of the WiFi-enabled device. Claims 3, 4, and 10 depend on

claim 1 and limitations requiring that the position estimate be based on characteristics from more than one Wi-Fi access point within range of the WiFi-enabled device; that the estimated expected error be based on a signal coverage area of at least one Wi-Fi access point, and where the WiFi-enabled device estimates the expected error of the position estimate.

5.   454, 074, and 960 Patents

The 454 (method claim 1 and system claim 13), 074 (method claim 1 and system claims 13, 17, and 19), and 960 (method claim 1 and system claim 13) Patents all address the problem of moved access points. As discussed above, Wi-Fi access points are not maintained in fixed, known locations. Businesses and people move, and they move their access points as well. This is a substantial problem because unless the system accounts for access points that have moved, position estimates based on the unreliable data can introduce substantial errors in position estimates. There are two scenarios: a Server-Side scenario and a User Device scenario.

First, consider the Server-Side scenario. There could be multiple readings for a given access point (reference locations), some taken before the access point has moved and some taken after. For example, an access point may have been moved from San Francisco to Boston, and there might be two scan readings in San Francisco (from before the move) and two in Boston (from after the move). If all readings are used to estimate the position of the access point, an unreliable access point calculated position could result (if triangulation were used, perhaps in Iowa) which could then be used to estimate the position of a WiFi-enabled device within range of that access point. A WiFi-enabled device that saw this access point when in Boston and used it to calculate the position of the WiFi-enabled device could calculate a very wrong position for the device. The Asserted Claims of each of the 454, 074, and 960 Patents address this scenario,

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and use possible GPS[2] location solutions associated with the scan data to infer if any of the reference locations associated with the access point are not the current location of the access point.

Second, consider the User Device scenario. A Wi-Fi enabled device in Boston detects three access points within range of the device. Two of the access points have calculated positions (reference locations) in the database in Boston (they have not been moved), but the third access point was recently moved from San Francisco to Boston and so has a calculated position in the database in San Francisco. If the three access points are used to estimate the position of the WiFi-enabled device, the position estimate might be somewhere in Indiana rather than Boston (again, if triangulation were used). The 074 Patent addresses this scenario, and uses a possible GPS solution for the location of the WiFi-enabled device to infer that the present location of the moved access point is not the present location of that access point.

6.   219 Patent

The 219 Patent addresses certain limitations of GPS systems, which can take much longer than WiFi-based location systems to obtain a location fix because the GPS system must acquire signals from at least four satellites in view of the GPS device and download and measure parameters from each of the satellites. Claims 4 and 5 of the 219 Patent claim a system that reduces the time-to-fix of a Wi-Fi and GPS-enabled system by injecting a WiFi-based location as an initial position estimate of the device, which can reduce the power consumption and time-to-fix of the GPS subsystem of the device.

B.   The Accused Instrumentalities

The Accused Instrumentalities that will be addressed at trial are:

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[2] The patent and claims refer generally to SPS (Satellite Positioning Systems) of which GPS (Global Positioning System) is a common example used in the U.S.

1.   Android Devices

Android is a mobile device (primarily smart phone and tablet) operating system developed and distributed by Google. The Android operating system is used on mobile devices marketed and sold by Google (branded as Nexus products) and on mobile devices made and sold by original equipment manufacturers ("OEMs") such as Samsung, Motorola, LG, and HTC. The evidence will show that Google Nexus devices directly infringe the 897, 234 and 074 Patents and Google Nexus devices with Qualcomm GPS directly infringe the 219 Patent. The evidence will further show that non-Google (OEM) WiFi-enabled Android devices with Google's NLP code (discussed below) directly infringe the claims of the User Device Patents 897 and 074 when location and expected error are calculated locally and indirectly infringe these claims when location and expected error are calculated remotely on Google GLS servers. Hundreds of millions of Android devices with Google's NLP code have been activated in the United States during the relevant time period (the 897 Patent, the earliest of the User Device Patents, issued on January 6, 2009).

2.   Google's NLP code

Google's NLP (Network Location Provider) code runs on Android devices and calculates locations, and the expected errors of locations, of WiFi-enabled devices using calculated positions for Wi-Fi access points within range of the device. The calculated positions are stored in Google's WiFi AP Table (discussed below) and in local memory on Android devices (the local device memory is referred to as the cache memory, or simply cache). If the Android device has sufficient location information stored in the local cache for Wi-Fi access points within range of the Android device, it does not need to communicate with Google's GLS servers to obtain access point calculated location information.

3.   Google's WiFi AP Table

Google's WiFi AP Table is a database that stores, among other information, unique identifiers (MAC addresses) and calculated positions for hundreds of millions of Wi-Fi access points in the United States for time periods relevant to infringement and damages. The WiFi AP Table infringes claim 1 of the 694 Patent, and users of devices that access the WiFi AP Table (Google and non-Google Android devices). Google's WiFi AP Table was accessed hundreds of millions of times per day during the relevant time period.

4.   Google's WiFi Pipeline

Google's WiFi Pipeline takes as an input scan data (including MAC addresses, scan location, signal strengths) collected by CityBlock vehicles (CityBlock access point data was collected from 2007 through 2010 and continued to be used by the WiFi Pipeline through 2012) and collected by Android and other devices using Google Location Services, and processes that data to generate calculated position information for each Wi-Fi access point in the WiFi AP Table. Google's WiFi Pipeline infringes the claims of the 454 and 960 Server-Side Patents (as well as the claims of the 074 Patent), and the combination of Google's WiFi Pipeline and WiFi AP Table infringes the claims of the 657 Patent.

5.   Google's GLS Server

Google's GLS server (Google Location Server) is the gateway between Android/NLP devices and the WiFi AP Table. It is also the gateway for non-Android devices to obtain estimated device locations and expected error though an API (application programming interface) called the Google Geolocation API.

Skyhook identified on a claim-by-claim basis which instrumentality infringes each of the Asserted Claims, both literally and under the doctrine of equivalents, and whether that

infringement was direct, contributory, or inducement infringement in the parties' Joint Pretrial Memorandum (Dkt. 580 at 5-9).

Google's source code (which implements the algorithms that estimate device location and expected error), other Google documents, and the testimony of Skyhook's experts (Michael Smith and James Geier), and Google witnesses will establish that the Accused Instrumentalities infringe Skyhook's Asserted Claims.

III.   GOOGLE'S INFRINGEMENT WAS WILLFUL

Google signed a non-disclosure agreement with Skyhook as early as March 2005 and over the next *three years* met with Skyhook founders Ted Morgan and Mike Shean and other Skyhook employees and received an in-depth look at Skyhook's technology under the guise of Google's interest in licensing Skyhook's product and building a business relationship. Tr. Ex. 620. Google received an unprecedented opportunity to conduct testing of Skyhook's production servers and Wi-Fi location product, a product Google knew was covered by pending patents because Skyhook told it so, and Google showed its acute awareness of this fact by circulating within Google published articles discussing and emphasizing that fact. Tr. Exs. 620, 621 (Skyhook email to Google including presentation slide deck stating Skyhook had "25 patents filed"); Tr. Ex. 1202 (internal Google email noting Skyhook "claim[s] to have 6 patents granted in this space. Wifi specific as well as methods/algorithms to improve accuracy using multiple sources, wifi, cellID, raw GPS . . . . re: patent grants. Has anyone looked into this and any exposure we may have?"); Tr. Ex. 377 (internal Google email summarizing included published article discussing Skyhook technology by noting "they talk about patents and IP at the end.").

The evidence will show that even early on Google sought to "just use skyhook to do some experiments for now," and then planned to "build our own global database" so that Google would not "need skyhook anymore." Tr. Ex. 1155. When Skyhook learned that Google planned

to use "its own drivers to try to recreate the Skyhook database," Skyhook informed Google of the

patents it was seeking and its "concerns" over Google's plan. Tr. Ex. 1209. At the same time,

Google's internal communications reveal that Google realized it had three options: "buy, license,

and build." Tr. Ex. 4983. ██

██ ██.[3] However, after

Apple's selection of Skyhook over Google for the iPhone, Google's resentment resulted in the

outright dismissal of acquisition and cementation of its decision to copy Skyhook. Tr. Ex. 1226

("it will tick me off if we have to buy them . . . . I just don't like those guys [Skyhook]—bunch

of punks").

The jury will hear evidence that Google was able to recreate Skyhook based on the

intimate knowledge of Skyhook's product gained through years of stringing Skyhook along

under the guise of development discussions and that Google had recognized that "building a

competing product" raised an "IP question." Tr. Ex. 5555 ("I think the big questions would

be: . . . the IP question . . . about building a competing product"). Nevertheless, Google had an

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██ Deposition

of Michael Lockwood (July 23, 2014) at ███████████. Google followed ██████████

██████████████████████████████ Deposition of Tsuwei Chen (Dec. 6, 2013)

at ██

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[3] All redactions have been made at Google's request based on its representations that the
materials being redacted, if disclosed, would harm Google's competitive standing, are trade
secrets, or are confidential business information of the kind this Court has previously granted
leave to seal. *See* Dkt. No. 611 at 1.

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██████████   For example, Google's corporate development representative specifically warned the location-services team in December 2008, after Skyhook's 694 Patent-in-Suit issued, that it would be wise to have someone on the IP team take a look at Skyhook's granted patents and provisionals. Tr. Ex. 1202. Faithful to its policy of willful blindness, and in violation of its published ethical code of conduct that expressly requires Google to "respect the intellectual property rights of others," Google stayed the infringing course and used Skyhook as a benchmark with which to compare Google's infringing product. Deposition of Steve Lee (Jan. 7, 2014) at 56:2-6 ("I think Skyhook provided a benchmark for us.").

IV.   THE PATENTS-IN-SUIT ARE VALID

The evidence will reveal the threadbare nature of Google's invalidity arguments. Google depends on a small number of references that lack multiple claim limitations and are not enabling. Skyhook will demonstrate that the prior art references discussed by Dr. Anthony Acampora ("Dr. Acampora") and Dr. William Griswold ("Dr. Griswold") do not disclose each element of the Asserted Claims of the Asserted Patents, nor render the Asserted Patents obvious, and Google will fail to meet its clear and convincing burden of proof. For many of Google's references, Skyhook's witnesses will establish invention dates that pre-date the purported prior art.

For his anticipation analysis of the 219 Patent, Dr. Acampora relies solely on U.S. Patent No. 8,193,978 to Moshfeghi (the "Moshfeghi patent"), and U.S. Patent No. 8,085,190 issued to Sengupta (the "Sengupta patent") in combination with Moshfeghi for obviousness. Skyhook's validity expert Dr. David Kotz ("Dr. Kotz") will show that these patents do not teach numerous limitations of the 219 Patent alone or in combination, including: (1) us[ing] the at least one WLAN position estimate [of] the WLAN and satellite enabled device as an initial position; (2) at

least one corresponding uncertainty estimate based on the signals received from the one or more WLAN access points; (3) us[ing] . . . the at least one corresponding uncertainty estimate to determine a final position estimate of the WLAN and satellite enabled device. Importantly, Dr. Acampora will not even attempt to explain how Moshfeghi or Sengupta discloses the limitation of dependent claim 5, a "metro wide" WLAN positioning system because he has been precluded from going beyond Dr. Borriello's original expert report. Dkt. No. 610.

For his anticipation analysis of the 657 Patent, Dr. Acampora relies solely upon U.S. Patent No. 6,799,047 issued to Bahl (the "Bahl patent"). However, Dr. Kotz will explain how the Bahl patent does not disclose multiple limitations of claim 1 of the 657 Patent: (1) calculated position information; (2) reducing arterial bias; (3) newly-discovered readings for Wi-Fi access points; (4) identifying potential error in the location information; (5) assigning attributes to subsets of readings; (6) comparing attributes of subsets; and (7) determination of position for Wi-Fi access points.

For his anticipation analysis of the 694 Patent, Dr. Acampora relies upon Schilit, *Challenge: Ubiquitous Location-Aware Computing and the 'Place Lab' Initiative* ("Schilit"). However, Skyhook will show that Schilit does not teach or enable the following five limitations of the 694 Patent: (1) target area with a radius on the order of tens of miles; (2) database records for substantially all access points; (3) calculated position information; (4) avoiding arterial bias; and (5) reference symmetry.

For his anticipation analysis of the 897 Patent, Dr. Griswold relies upon Place Lab. However, Dr. Kotz will show Place Lab does not include multiple limitations of claims 1, 3, and 4 of the 987 Patent, including: (1) recorded location information; (2) using signal strength information when calculating geographical position; (3) comparing recorded locations to a

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reference point; (4) predefined threshold; and (5) determining a reference point by clustering access points.

Dr. Griswold's anticipation analysis of the 234 Patent relies upon several references. However, Dr. Kotz will show that all of these references fail to disclose multiple limitations of the Asserted Claims, including: (1) estimation of expected error of a position estimate in terms of distance; (2) estimation of expected error based on signal coverage area, use of a WLAN-enabled device to estimate expected error.

For his anticipation analysis of the 074, 454, and 960 Patents, Dr. Griswold relies upon several references. However, Dr. Kotz will show that all of these references fail to disclose multiple limitations of the Asserted Claims, including: (1) reference databases with reference locations; (2) clustering reference locations; (3) estimating distance between reference locations and SPS location solutions; (4) predefined threshold; and (5) inferring that reference locations are not the present locations of access points.

While Google has few obviousness contentions remaining, Skyhook will offer voluminous evidence of objective indicia of nonobviousness of the Asserted Claims, including evidence of copying by Google, skepticism in the industry, praise of Skyhook's inventions, and commercial success. Google does not have any live enablement, written description, or indefiniteness contentions that are supported through its experts.

V. GOOGLE OWES SUBSTANTIAL DAMAGES TO SKYHOOK UNDER EITHER LOST PROFITS OR REASONABLE ROYALTY ANALYSES

A. Skyhook's Lost Profits Meet All Four *Panduit* Factors

Skyhook will present at trial both lost profits and reasonable royalty damages. For lost profits, Skyhook seeks lost profits on sales from seven major Android OEMs—Samsung, Motorola, HTC, LG, Sony Ericsson, ZTE, and Huawei. For the sales of the remaining Android

devices and all non-Android devices, Skyhook's expert Professor Stephen Magee calculated a reasonable royalty.

Although rare in lost profits cases, Skyhook will present to the jury real-world evidence that Samsung and Motorola inked contracts with Skyhook for Skyhook's location product, XPS, which embodies six of the Patents-in-Suit. Moreover, for the remaining five OEMS, Skyhook conducted substantial negotiations, including exchanging term sheets with several of them. Google's own documents will show that Google considered Skyhook the main competitor for Wi-Fi location services and the "only other viable alternative," and informed its Founder, and then-President, Larry Page, that Skyhook was one of the two world-class Wi-Fi location providers (the other being Google). Tr. Ex. 2133. Moreover, Google's own documents will also show that Google competed directly with Skyhook and prided itself on displacing Skyhook with several OEMs due to the free nature of Google's Wi-Fi location service. For example, Steve Lee, the head of the location team at Google at the time, wrote, "We've won many deals against Skyhook (Mozillla, Palm Pre, HTC, SonyEricsson, etc.) . . . ." Tr. Ex. 4573. Further, Jon Koplin, one of Google's employees in charge of persuading OEMs to use Google's NLP, wrote "SonyEricsson has been approached [by Skyhook] but I believe we have fended them off of SkyHook once they realized that we are free and SkyHook is not." Tr. Ex. 2227.

Skyhook will present to the jury Professor Magee's thorough lost profits analysis using the *Panduit* factors. *Panduit Corp. v. Stahlin Bros. Fibre Works*, 575 F.2d 1152, 1156 (6th Cir. 1978). For *Panduit* Factor 1, Professor Magee will prove the demand for the patented product directly through contracts signed and negotiations Skyhook conducted with the seven Android OEMs for which he calculates lost profits. Professor Magee will explain his use of Skyhook's dozens of other contracts, including its first major contract—the contract to provide Wi-Fi

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location services on the first Wi-Fi capable iPhone—as well as contracts with HP and for applications that are provided on Android devices, such as MapQuest or Priceline. For *Panduit* Factor 2, Professor Magee will explain how he considered all of the potential non-infringing alternatives either party had identified during discovery, and based on Google's own documents and the opinions of Skyhook's technical expert, James Geier, Professor Magee will explain why he concludes that there is no available, acceptable non-infringing alternative. For *Panduit* Factor 3, Professor Magee will explain that Skyhook actually marketed its product to the seven OEMs for which lost profits are calculated, which shows its "marketing capability." The evidence will also show that Skyhook had the "manufacturing" capability to service all seven Android OEM contracts because the nature of Skyhook's embodying XPS product is such that its Wi-Fi database is less than 100 GB in size and its product merely requires a server with sufficient bandwidth. For *Panduit* Factor 4, Professor Magee will explain his calculation of the amount of profits Skyhook would have made based on Skyhook's initial July 2008 license with Motorola. This contract was executed before Google made its "free" infringing alternative available, and is thus unaffected by Google's price pressure.

B.   Google's Challenge to Skyhook's Lost Profits and Reasonable Royalties Based On Alleged Android Incompatibility Of Skyhook's XPS Product Has Been Rejected by This Court

Google's main assertion regarding Professor Magee's lost profits analysis is that Skyhook could not make an Android-compatible product, and therefore, Skyhook cannot prove Android demand for the patented product or manufacturing capability. However, as this Court explained: "The issues here, however, are whether Skyhook offered an Android-compatible product, whether there was demand for that product, and whether Skyhook had the capacity to meet that demand. That a particular Skyhook product that was the subject of two licenses failed this test is not dispositive of whether Skyhook can otherwise satisfy it." Dkt. No. 563 at 27.

Moreover, this Court found Dr. Magee's opinions based on "examples of Motorola and Samsung products that passed Android compatibility tests or that were otherwise shown to be compliant with Android's requirements" to be admissible under the *Daubert* standard. *Id.*

> **C.** **Skyhook's Reasonable Royalty Rates Are Rooted In Real-World Contracts For Skyhook's Embodying Product and Evidence of Substantial Value of Skyhook's Patents-in-Suit**

The evidence will also show that Google derives separate and significant value from the two groups of Skyhook's patented inventions asserted in this case: User Device and Server-Side Patents. Skyhook will explain how its 219 Patent falls into a separate category because it involves using the Wi-Fi positioning system to provide the initial position for satellite positioning systems (such as GPS) in a hybrid location system.

Professor Magee will explain that because Skyhook has never previously entered pure patent licenses on any of its patents, he assessed the royalty rate that would apply in the *Georgia-Pacific* hypothetical negotiation with Google based on real-world licenses for the embodying products, WPS and XPS. The jury will hear how Professor Magee first assessed the rate on User Device Patents based on Skyhook's licenses with Samsung, HP, and five other companies paying royalties on a per-unit rate. The User Device Patents-in-Suit relate to improvement of accuracy, speed, or power consumption in the use of Wi-Fi location, from which the end user is a direct beneficiary, and it follows that in their licenses with device manufacturers, those OEMs and their end users benefit from the value of these patents in particular. Furthermore, as will be explained to the jury, under those licenses Skyhook received the extremely valuable Wi-Fi data from the licensed mobile devices on which its XPS product ran, whereas in the hypothetical negotiation Google would be licensing only the patents and Skyhook would not receive the value of the data it received through its product licenses. In addition, Professor Magee will explain that the mobile devices would also use Google's Wi-Fi database, which is covered by the Server-Side

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Patents, but their use—and thus the value of those patents to the OEMs and the end user—would be infinitesimal because the devices may use a very small amount of data from Google's Wi-Fi database and store it in their cache. The jury will then hear how Professor Magee calculated the weighted average rate from the WPS/XPS licenses and apportioned that rate to reflect only the value of the User Device Patents. Professor Magee's rate is entirely consistent with the real-world XPS licenses Motorola and Samsung signed.

The jury will hear how Professor Magee assessed a separate royalty rate for Server-Side Patents. Professor Magee's analysis uncovered equally compelling evidence that running the Server-Side back-end systems is even more valuable on a per-user basis. As will be explained to the jury, Google and Skyhook are willing to give the User Device technology away for free under certain circumstances in exchange for the ability to build and maintain their own Wi-Fi databases. In some instances, Skyhook licensed XPS to application developers for free in return for the data obtained from the devices that run those applications. The jury will be presented with evidence showing that it is undisputed that enabling the User Device collection of data and the accuracy of the data (which is also a critical patented benefit of Skyhook's Patents-in-Suit) is essential to this business model for both Google and Skyhook. The jury will also learn that Professor Magee's patent citation analysis of the Patents-in-Suit—uncontested by Google and embraced by its damages expert—confirmed Professor Magee's conclusions. Professor Magee calculated a royalty rate specific to the 219 Patent based on opinions of Skyhook's technical expert, Mr. Geier; a study that links the benefits of the 219 Patent to improvement in accuracy; and the patent citation analysis.

> **D.**   **The Evidence Will Show Google Owes Royalties On All Android-Activated Devices And A Related Proportion of Non-Android Devices**

Skyhook will prove at trial, with more than reasonable certainty, that all Android activated devices should be included in the royalty base. The evidence will show that Google tracks the number of Android devices activated worldwide, which Professor Magee used for his royalty base. Google's own documents support the inclusion of all activated Android devices. First, Google reports billions of requests per day received by its accused Wi-Fi database from Android devices, which by far exceeds the number of active Android devices at any point. Tr. Ex. 154 (Corrected Expert Report of Dr. Stephen P. Magee (Aug. 26, 2014)), ¶¶ 368-72. Second, Professor Magee's conclusions are based on a painstaking analysis of the available information Google produced.

The jury will also learn how Professor Magee carefully evaluated the evidence for non-Android devices. For non-Android devices that use Google's Accused Instrumentalities, Professor Magee used a conservative, principled approach based on Google's own "dashboard"— a metric that showed the numbers of Wi-Fi requests Google's Location Services receive from Android and non-Android devices. Professor Magee will explain that through regression analysis, he calculated the number of non-Android devices that make use of Google's Accused Instrumentalities. Skyhook will show that Google not only has not challenged this methodology but its damages expert embraced the numbers of non-Android devices Professor Magee calculated and used them in his own analysis.

> **E.**   **Google Creates Its Infringing Product In The United States But Benefits From Its Use By Devices Located Worldwide**

Google's infringing Wi-Fi database (in particular, the WiFi AP table) and WiFi Pipeline used to create the database are Accused Instrumentalities under Skyhook's Server-Side Patents. As the jury will hear, Google's corporate testimony confirms that Google creates those

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instrumentalities in the United States, but uses them to serve requests from mobile devices around the world. This enables Skyhook to seek both worldwide lost profits and worldwide reasonable royalties on Server-Side Patents. In simple terms, because Google's accused "product" is manufactured in the United States, Skyhook is entitled to worldwide-lost profits. *Amstar Corp. v. Envirotech Corp.*, 823 F.2d 1538, 1546 (Fed. Cir. 1987) (recognizing that damages for lost foreign sales are appropriate when infringing product was manufactured inside United States). Further, for purposes of obtaining worldwide royalties on Server-Side Patents, Skyhook will prove at trial that Google creates and uses the accused system in the United States, so that the United States is "the place where control of the system is exercised and beneficial use of the system obtained." *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1317-18 (Fed. Cir. 2005). Here, Google creates and controls the accused database, and Google benefits from the device users' use of the database by collecting Wi-Fi data from those devices and attracting worldwide users to its mobile ads platform, which Google monetizes.

Skyhook will be asking the jury to award over $1.16 billion in reasonable royalties, or at a minimum, over $1 billion in lost profits plus reasonable royalty.

Dated: March 2, 2015   Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that on March 2, 2015, the foregoing document was electronically filed with the Clerk of the Court using the CM/ECF system, which will issue an electronic notification of filing to all counsel of record.

/s/ Matthew D. Powers
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